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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,590	02/27/2002	Tomoyuki Yogo	Q68502	3866
23373	7590	09/01/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NGUYEN, CAM N	
			ART UNIT	PAPER NUMBER
			1754	

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,590

Applicant(s)

YOGO ET AL.

Examiner

Cam N Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on February 27, 2002 (a 371 of PCT/JP00/05708)
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/26/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C.

121:

- I. Claims 1-2, drawn to a catalyst, classified in class 502, subclass 325+.
- II. Claim 3, drawn to a process for producing a catalyst, classified in class 502, subclass 104+.
- III. Claim 4, drawn to a method of deep desulfurization of mineral oil using a catalyst, classified in class 208, subclass 145+.

2. The inventions are distinct, each from the other because:

Inventions I and II are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the process as claimed can be used to make other and materially different product, such as a sorbent or a refractory inorganic metal oxide support material containing other metal oxides of the Periodic Table other than the claimed metal oxides.

Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the

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instant case, the product as claimed can be used in a materially different process of using that product, such as in the hydrocarbon conversion processing of aromatics, olefins, etc., or in the purification of automotive exhaust gases from an internal combustion engine.

Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions produce different products, that is the product obtained by the process of Group II is not the same as the product obtained by the process of Group III.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, III, etc. and have acquired a separate status in the art as shown by their different classification, and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with **Mr. Raul Tamyo** on **August 23, 2004** a provisional election was made with traverse to prosecute the invention of Group I, claims 1-2. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3-4 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b)

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if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

Specification

4. The abstract of the disclosure is objected to because it is too long. According to the MPEP, the abstract should be in narrative form and generally limited to a single paragraph within the range of 50 to 150 words. The abstract should not exceed 25 lines of text. Correction is required. See MPEP § 608.01(b).

Claim Objections

5. Claim 1 is objected to because of the following informalities:
- A. In claim 1, line 3, "of" should be changed to --containing--.
 - B. In claim 1, line 6, -- , -- should be inserted after "weight".
 - C. In claim 1, line 7, -- , -- should be inserted after "weight".
 - D. In claim 1, line 9, it is suggested deleting "the content of" before "zinc oxide" and before "aluminum oxide" because it is too wordy.
 - E. In claim 1, line 13, it is suggested applicants replace the term "standard-state" with other term since this term is not commonly used in the claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissen et al., "hereinafter Nissen", (US Pat. 4,049,571).

Nissen discloses a catalyst composition consists essentially of nickel and/or cobalt at a concentration of 3 to 50% on a chemically inert support, an optional minor quantity of copper on said support and zinc oxide in an amount of 1 to 20% on a catalyst support (see col. 8, claim 8). Suitable support materials including aluminum oxide or Al_2O_3 (see col. 3, In 35-37 & Examples).

With respect to the "nickel" concentration, the claimed range falls within the disclosed range, thus met.

With respect to the "zinc oxide" concentration, Nissen does not disclose the same zinc oxide concentration as being claimed. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have optimized such zinc oxide concentration in Nissen in order to achieve an effective catalyst composition since it involves only a matter of routine experimentation of one having the level within the skill in the art to do so. See In re Boesch.

With respect to the claimed "nitrogen monoxide adsorption" and "specific surface area", while the reference is silent with respect to these catalyst properties, it would be expected the catalyst composition of Nissen would possess the same properties since the catalytic components are the same and the concentrations would be the same after the optimization of the zinc oxide concentration.

Regarding claim 2, it is considered the claimed process limitations are product-by-process limitations. While the process limitations in the claim are not disregarded, the determination for the patentability of the claimed catalyst is separately from its process of production. Thus, the process limitations as being claimed have no bearing on the patentability of the claimed catalyst. See In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985); In re Brown, 173 USPQ 688, 688 (CCPA 1977); In re Fessman, 180 USPQ 324, 326 (CCPA 1977). See also *MPEP 2113*.

Citations

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 Form attached. All references are cited for related art.

Conclusion

9. Claims 1-4 are pending. Claims 1-2 are rejected. Claims 3-4 are withdrawn due to nonelected (distinct) invention(s). No claims are allowed.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cam Nguyen, whose telephone number is (571) 272-1357. The examiner can normally be reached on M-F from 9:30 am. to 6:00 pm.

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to telephone number (571) 272-1700.

Nguyen/cnn *cnn*

August 26, 2004

Cam Nguyen
CAM N. NGUYEN
PRIMARY EXAMINER

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